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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,605	12/20/2001	James W. Everitt	CLMCR.016A1	4545

20995 7590 07/12/2004

KNOBBE MARTENS OLSON & BEAR LLP  
2040 MAIN STREET  
FOURTEENTH FLOOR  
IRVINE, CA 92614

EXAMINER
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LAO, LUN YI

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 07/12/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/029,605

Applicant(s)

EVERITT, JAMES W.

Examiner

Lao Y Lun

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-7 and 9-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/029,563. Although the conflicting claims are

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not identical, they are not patentably distinct from each other because they claim the same subject matter of a display apparatus for driving an light emitting diode by correction table comprising a driver having two capacitor, the first capacitor for driving current across an organic light emitting diode in a first row and the second capacitor for driving current across an organic light emitting diode in a second row.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1- 4, 11, 15 and 18-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al(EP 0,905,673) in view of Suzuki(6,369,786).

As to claims 1-4, 11, 15 and 18-19, Kane et al teach a video display comprising: a voltage correction table(1340)(see figures 13-14, 17, 19, 21); a calibration Unit(see figure 15, 16, 18, 20, 22, 23) for generating data in the voltage correction table; and at least one driver(data driver 110) configured to

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drive at least one organic light emitting diode(304) at a voltage defined, at least in part, by the voltage correction table(see figures 1, 3, 13-15; column 15, lines 43-58; column 16, lines 1-2 and lines 39-42; column 20, lines 17-58 and column 21, line 1).

Kane et al teach the correction data stored in the table(1340) being derived based on a plurality of reference voltages(VDD)(see figures 13; column 15, lines 43-58 and column 16, lines 1-2). Kane et al fail to disclose the correction data being derived based on a plurality of reference currents.

Suzuki teaches a voltage driver(4) can be converted to a current diver(CS1-CSx)(see figures 1, 4 and column 4, lines 13-26). It would have been obvious to have modified Kane et al with the teaching of Suzuki, since the current driver could have less susceptible to a voltage drop due to power supply and the light intensity of the light emitting element is proportion to the current.

As to claim 2, Kane et al teach the voltage correction table including a current to voltage lookup table(voltage output is proportional to the current input(see figures 13-14 and column 15, lines 52-58).

As to claim 4, Kane et al teach the voltage correction table includes a pixel offset compensation table(see figures 13-16; column 19, lines 22-58; column 20 and column 21, lines 1-20).

5. Claims 1- 4, 11, 15 and 18-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Fan(6,473,065) in view of Suzuki(6,369,786).

As to claims 1, 3, 6, 11, 13, 15, 18 and 19, Fan teaches a passive matrix of LED display comprising a voltage correction table(70); a calibration unit(70,80,90) for generating data in the voltage correction table based on a plurality of reference voltages; and a driver(90) for applying the correcting voltage to light emitting diodes(5)(see figures 1-3, 5a, 5b; column 3, lines 46-68; column 4, lines 1-38 and column 6, lines 14-52).

Fan fails to disclose the correction data being derived based on a plurality of reference currents.

Suzuki teaches a voltage driver(4) can be converted to a current diver(CS1-CSx)(see figures 1, 4 and column 4, lines 13-26). It would have been obvious to have modified Fan with the teaching of Suzuki, since the current driver could have less susceptible to a voltage drop due to power supply and the light intensity of the light emitting element is proportion to the current.

6. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silvestre et al(WO 01/27910).

As to claims 1 and 5, Silvestre et al teach a video display comprising a current correction table(13); a calibration unit(6, 7, 13, 14) for generating data in the current correction table based on a plurality of reference currents(11); and a driver(6) for applying the correcting current to light emitting diodes(12)(see figures 1-3; page 5, lines 29-32; page 6, lines 1-23 and page 7, lines 3-13).

It would have been obvious to have a voltage correction table instead of a current correction table since the current can be converted to a current by applying resistance.

As to claim 5, Silvestre et al teach a correction table having a column resistance lookup table(see page 6, lines 4-18).

7. Claims 1, 5-7, 9-13, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi(5,708,452) in view of Silvestre et al(WO 01/27910) and Kuga(5,703,608).

As to claims 1, 5-7, 9-13, 18 and 20, Takahashi teaches a passive matrix of LED display comprising a voltage correction circuit(Brightness adjusting circuit); a calibration unit(3, 4 and brightness adjusting circuit ) for generating data in the voltage correction table; and a driver(4) for applying the correcting voltage to light emitting diodes(see figures 3-4 and column 3, lines 20-56).

It would have been obvious to have a brightness adjusting circuit containing a table so as to correct the error presented on a display more easily.

Takahashi fails to disclose the correction data being derived based on a plurality of reference currents.

Silvestre et al teach a video display comprising a current correction table(13); a calibration unit(6, 7, 13, 14) for generating data in the current correction table based on a plurality of reference currents(11)(see figures 1-3; page 5, lines 29-32; page 6, lines 1-23 and page 7, lines 3-13). It would have been obvious to have modified Takahashi with the teaching of Silvestre et al, since using a current driver having less susceptible to a voltage drop due to

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power supply and the light intensity of the light emitting element is proportion to the current.

As to claim 5, Silvestre et al teach a correction table having a column resistance lookup table(see page 6, lines 4-18).

As to claims 7, 9, 12 and 20, Takahashi fails teach a display device having a driver have two capacitors.

Kuga teaches a display apparatus having a driver(207) with two capacitor(15, 16) alternatively connected to a signal line(3)(see figures 1-3, 9; column 3, lines 18-42 and lines 59-68; column 4, lines 1-10 and lines 42-61). It would have been obvious to have modified Takahashi et al with the teaching of Kuga, since they both have sample and hole circuit(see Takahashi's figure 3 and Kuga's figure 9) and Takahashi et al as modified could provide a display apparatus having a high image quality and a high reliability with a simple structure(see Kuga's column 3, lines 57-68).

### ***Allowable Subject Matter***

8. Claim 8 is allowable.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-7, 9-13, 15 and 18-20 have been considered but are moot in view of the new ground(s) of rejection.



Applicant argues that claims 1-7 and 9-20 should not be rejected under the judicially created doctrine of obvious-type double patenting rejection as being unpatentable over claims 1-9 of co-pending application No. 10.029,563 on page 8. The examiner disagrees with that since they claim the similar subject matter of a display drive method having a correction table for generating data being derived based a plurality of reference currents. For example:

<b>Claim 1 of S.N. 10/029,605</b>	<b>Claim 1 of S.N. 10/029,563</b>
Voltage correction table	Voltage correction table
A calibration unit configured to generated data in voltage correction table, said data being derived based, at least in part, on a plurality of reference currents	Storing voltage data in correction table, the voltage data being derived based, at least in part, on a plurality of reference currents.
At least one driver configured to drive at least one organic light emitting diode at a voltage defined, at least in part, by the voltage correction table.	Determining a voltage using, at least in part, the voltage data from the correction table; and applying the determined voltage to an organic light emitting diode.

Applicant argues that the reference of Silvestre et al(WO 01/27910) is not 102(e) reference on page 11. The examiner is in agreement. However, Silvestre et al is 102(a) reference. The 102(a) reference is the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

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or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

July 6, 2004



**Lun-yi Lao**

**Primary Examiner**